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International harvester co.

Farm implements.

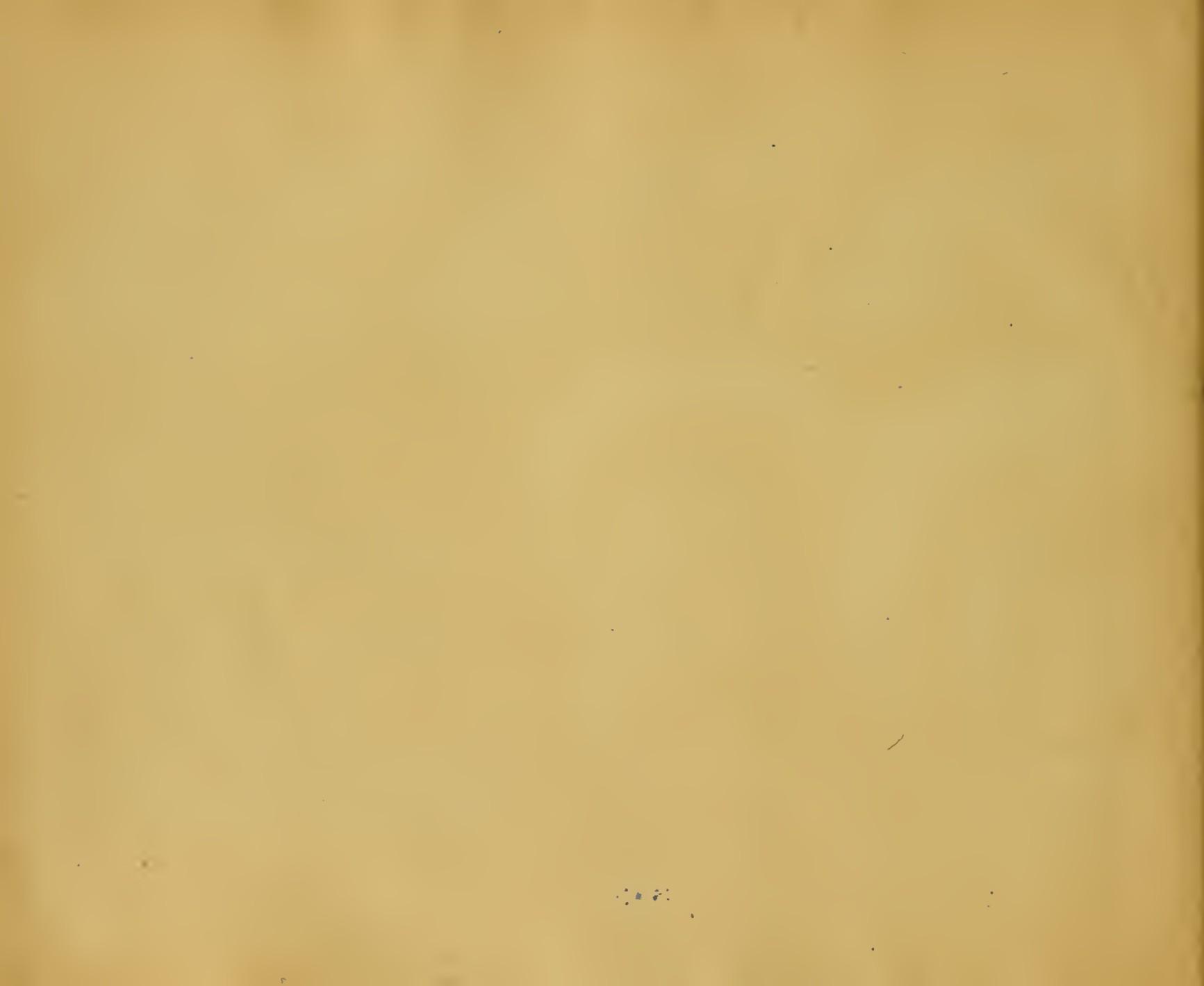
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I-H-C
PULL POWER
HAY
PRESSES

THE SONG OF THE MEADOW





In the I H C hay presses, those highly desirable points—capacity, strength, light draft, simplicity, and convenience — have been developed to a remarkable degree.

These hay presses are of thoroughly good construction and meritorious design. They have been designed to meet the requirements of the farmer who wishes to bale his own hay, and they also prove the most profitable press for the custom baler.

The material and workmanship entering into the construction of I H C hay presses are the best procurable.

I H C hay presses are neat, compact machines, the strength and durability of which have been proved by the best of service.

They are very economical, as they require the minimum amount of power and help—two points that will be appreciated by every press user.

International Harvester Company of America
(INCORPORATED)
CHICAGO U S A

ADV. 115-A



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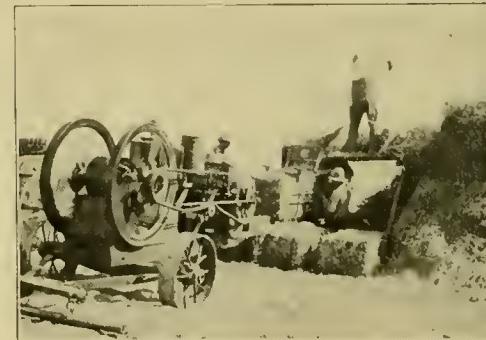
Baled Hay

The I H C hay press is a money maker and money saver for the hay grower. The most profitable market for hay is very often a considerable distance from the place where the hay is grown, and unless the hay is baled, the grower is at a disadvantage. He must accept whatever the local market offers. Moreover, baled hay is, in many cases, more salable than loose hay because it can be stored in one-fifth the space required for the same amount of loose hay, and is clean and convenient for feeding.

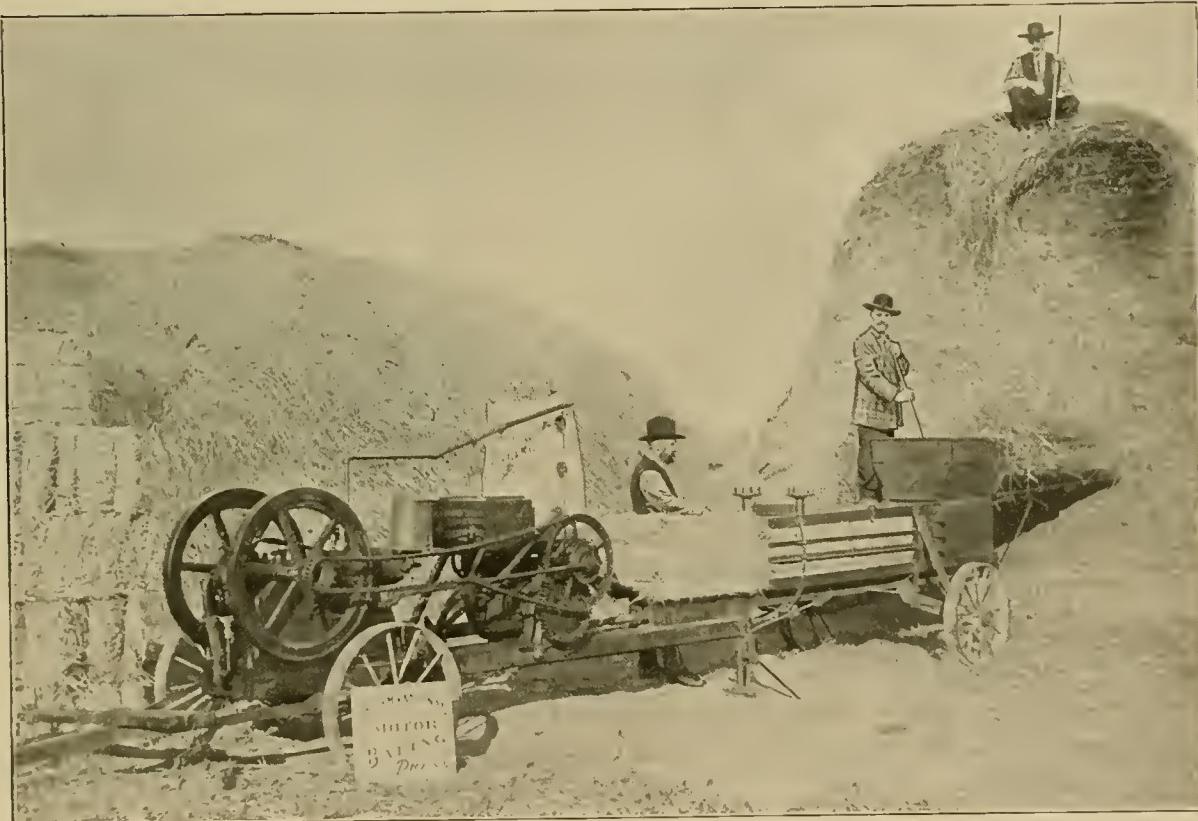
Baling has been done principally where large quantities of hay were grown for distant markets, but in recent years many farmers have come to realize that a considerable part of their hay was going to waste in exposed parts of stacks, and have invested in a hay press to their profit.

A considerable amount of loose hay is always wasted by being scattered about the barn when feeding, and by being pulled out of the mangers by the stock. Baled hay can be quickly fed without waste, and can be pushed well down into the mangers so that it is not easily thrown out. Baling reduces the expense of handling hay and eliminates waste.

The man who owns a hay press does not have to wait the coming of the custom press, but can bale his own hay at the time which best suits him. He can use the press profitably for baling straw and shredded corn fodder, as well as hay. The I H C hay press will pay for itself in a remarkably short time.



I H C HAY PRESSES



International motor press in operation

PAGE THREE



International Motor Baling Press

The International Motor Baling press is a self-contained outfit. The I H C toggle joint bale chamber and an I H C gasoline engine are mounted together on a substantial truck.

Those who grow hay extensively and custom balers will find that this outfit possesses many advantages which will make it a profitable machine to own.

There is no time wasted in setting this machine as it is not necessary to stake it down or dig holes in the ground for the wheels. The operator may set the machine at any side of the stack desired and always have the press in a position convenient to receive the hay.

A particular advantage of this press is the ease with which it may be set for use in bank barns. In such cases the outfit can be made to set level by putting the bale chamber in the barn, blocking up the wheels under the engine and removing the wheels under the bale chamber.

The International Motor Raling hay presses are made in three sizes, 14 x 18 bale chamber operated with a 3-horse power, I H C vertical gasoline engine,—16 x 18 bale chamber operated with a 4-horse power, I H C horizontal gasoline engine and 17 x 22 bale chamber operated with a 6-horse power, I H C horizontal gasoline engine. Anyone of the above outfits can be furnished with any of the three sizes of bale chamber, as the bale chambers are interchangeable.



Capacity

The number of tons of hay these presses will bale depends to a considerable extent upon the quality of the hay. Prairie hay which is short and fine, feeds through the press much more rapidly than coarse timothy, alfalfa, or clover.



Where it is desirable to get a large amount of hay baled in as short a time as possible and where the self feed attachment is used, it is a good plan to use a 6-horse power engine with either of the large size bale chambers. However, to make this arrangement profitable, sufficient help must be furnished to keep the press supplied with hay. Where only a limited number of men are available, the small press with self feed attachment and operated with a 4-horse power engine will be found very satisfactory.

The motor presses have a larger capacity than the horse presses because where the horse presses make only six to seven strokes per minute, motor presses make from ten to fourteen strokes per minute.

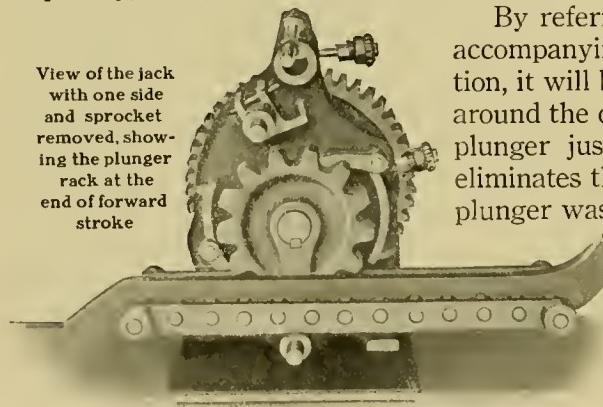
While it would be impossible to state definitely the amount of hay any press will bale in a given time, it is perfectly safe to say that under ordinary conditions in average timothy hay, the 14 x 18 press operated with a 3-horse power engine will bale about twelve tons per day, the 16 x 18 press with 4-horse power engine about fourteen tons per day, and the 17 x 22 press with 6-horse power engine sixteen tons per day. These estimates are conservative and there are conditions under which a much greater amount can be baled.



Power Jack

The power jack used on International motor presses is entirely different in construction from that used on any other press. It insures the strongest and steadiest action to be found in any press. The gears which drive the plunger rack are fitted with a compensating gear to take up any play or wear that might occur in the teeth. An even pull on both sides of the jack is insured by this gear and it also increases durability as it eliminates the possibility of breakage. The plunger rack is held in place against the drive gear by two case-hardened steel rollers, one above, and one below the gear. These rollers prevent any jarring or pounding on the gear, consequently, reduce wear and danger of breakage.

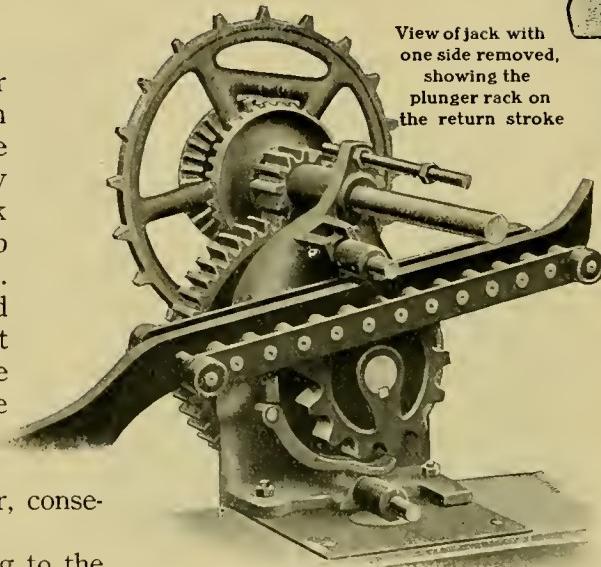
View of the jack with one side and sprocket removed, showing the plunger rack at the end of forward stroke



By referring to the accompanying illustration, it will be seen that the plunger rack moves completely around the drive gear. This gives the return stroke of the plunger just as positive action as the forward stroke, and eliminates the danger of breakage which would result if the plunger was thrown back suddenly by the rebound of the hay.

A heavy drive chain is used to transmit power from the engine to the power jack. The tension of this chain can always be properly regulated by an adjustable idler which is attached to the power bed between the engine and the power jack.

View of jack with one side removed, showing the plunger rack on the return stroke

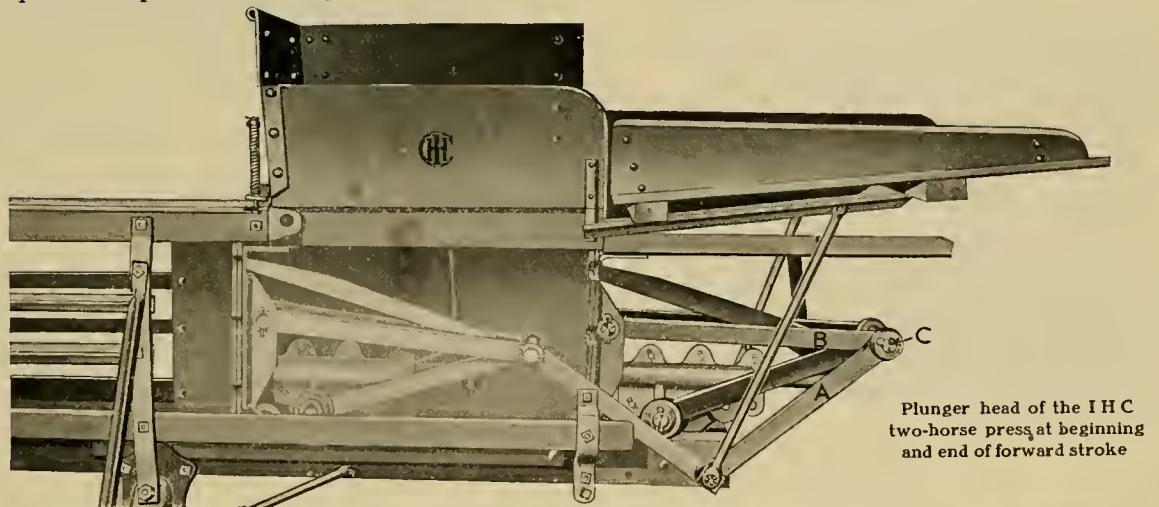


Toggle Joint Plunger

I H C hay presses have a toggle joint plunger which is very simple and powerful in its operation. In the illustration on this page the plunger is shown at the beginning and end of a stroke.

At the beginning of the stroke the rear toggle link (A) is pulled upwards until the stroke is half completed, and the link is in a vertical position. The pull then becomes a downward one, the power being applied at the toggle joint (C). As the stroke advances, the pull at the toggle joint begins to straighten the links (A & B), and as they become straighter, the pressure resulting becomes greater and greater. By this arrangement the speed of the plunger decreases and the pressure that it exerts increases as the stroke nears completion. The greatest pressure is exerted when most needed, that is, at the end of the stroke.

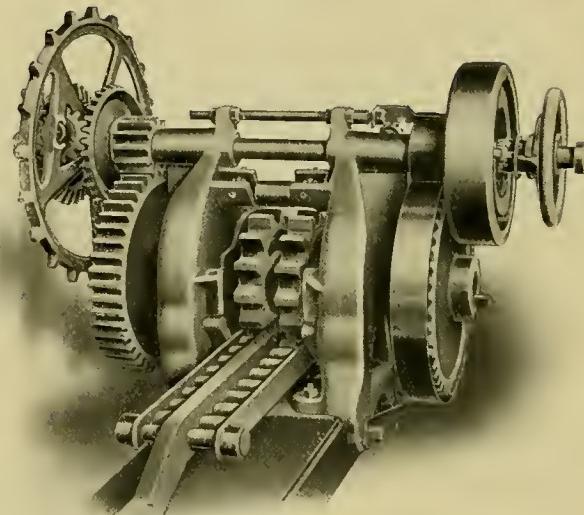
The draw-bar extends up through the bed angles and is attached to the draw-bar bracket. The rollers upon which the plunger head and draw-bar bracket rest, reduce friction and cause the press to operate smoothly.



Plunger head of the I H C
two-horse press at beginning
and end of forward stroke

Plunger Rack

The plunger rack is made entirely of steel and is of proportions that insure great strength. As the power exerted is a pull and not a push there is not the danger of buckling that there is on other presses where a pitman type of rack is used. Two case hardened steel rollers hold the plunger rack firmly against the drive gear. This prevents any jarring or pounding of these parts, reduces friction and eliminates the danger of breakage. The plunger rack moves smoothly and steadily around the drive gear. The plunger rack is covered with a shield which protects it when bales are pushed out, and it also protects the operator should he wish to step over to the opposite side of the machine.



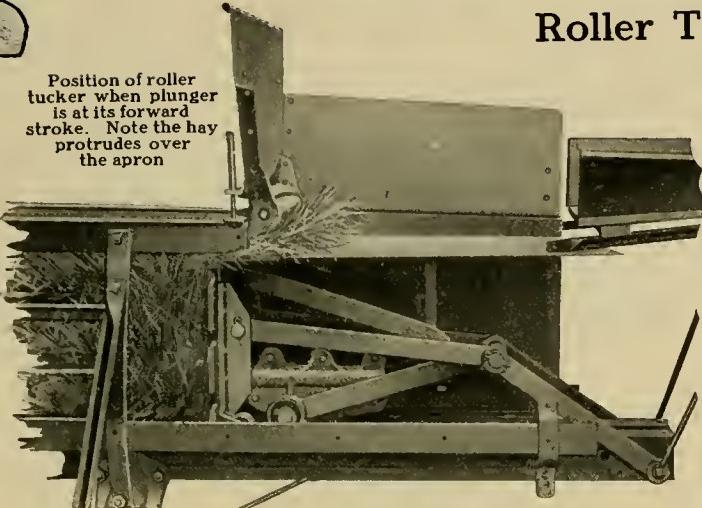
Compensating gear takes up all wear and play in the
drive teeth gear



Plunger Rack



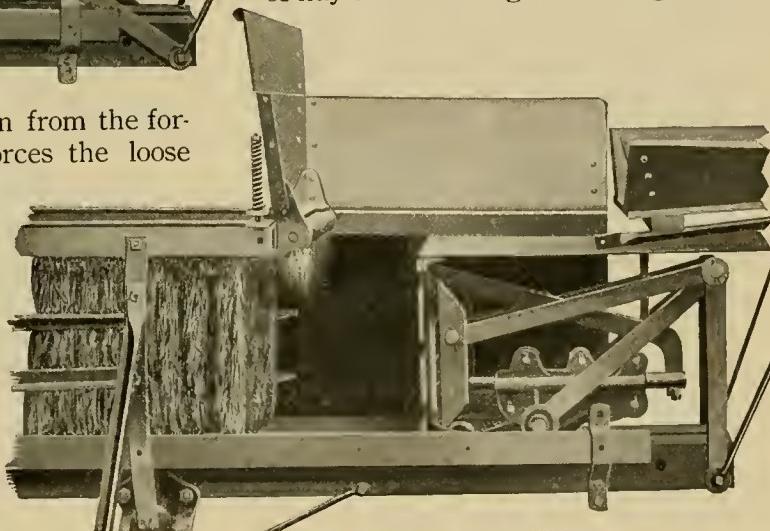
Roller Tucker



When the plunger is withdrawn from the forward stroke, the roller tucker forces the loose straggling ends of hay down into the bale chamber against the last charge and the next charge holds them there. The springs which operate the roller tucker are adjustable.

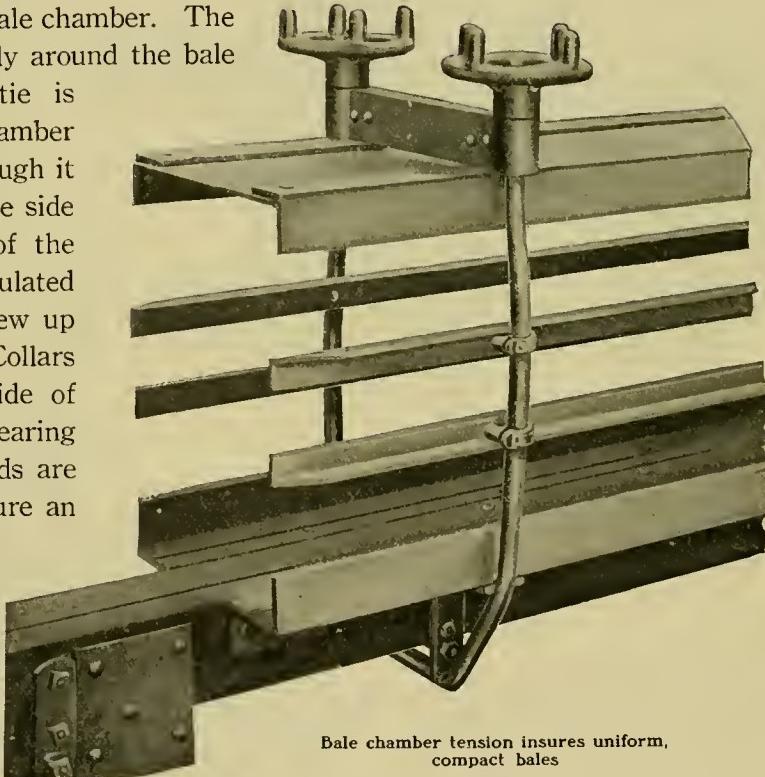
Another advantage the roller tucker gives these presses, is that by folding down the straggling ends of hay, the bale chamber is always kept clear for the incoming charge, and the hay is prevented from lapping over the head block.

The importance of neat and attractive bales has not been overlooked in designing I H C hay presses. The loose ends of the charge always drop back over the end of the apron and will cause rough looking bales unless they are folded down and held in place by the next charge. I H C hay presses are equipped with a roller tucker which folds down all straggling ends of hay and insures good looking bales.



Bale Tension

The bale tension on the I H C hay press is located at the outer end of the bale chamber. The tension is applied evenly entirely around the bale chamber. The steel tension tie is located at the top of the bale chamber and the tension rod passes through it and extends from the top of one side under the bottom to the top of the other side. The tension is regulated by two hand wheels which screw up and down on the tension rod. Collars are provided on the under side of these wheels which prevent wearing of the threads. The tension rods are strong and unyielding, and insure an even pressure on all sides of the bale chamber; consequently the bales are always compact and of uniform weight. The bale tension is very sensitive and responds quickly to the slightest adjustment from the hand wheels.

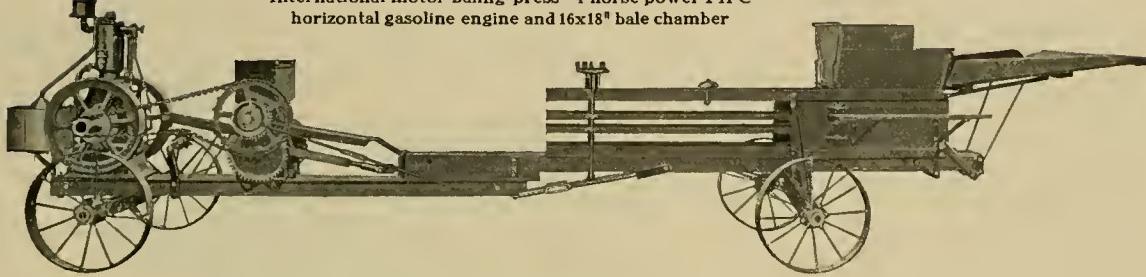


Bale chamber tension insures uniform,
compact bales

I H C HAY PRESSES

Advantages of I H C Presses

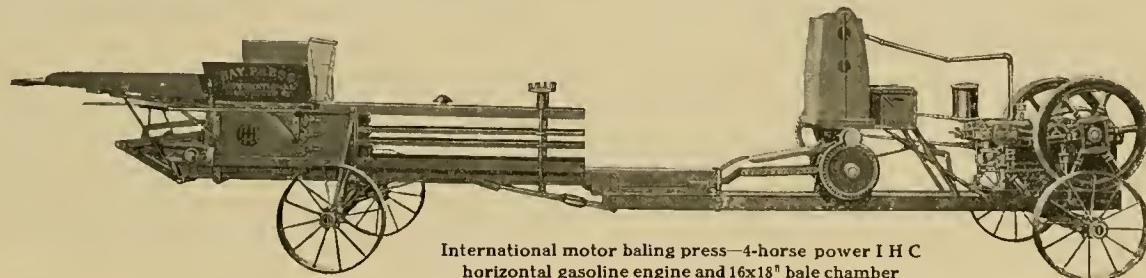
International motor baling press—4-horse power I H C
horizontal gasoline engine and 16x18" bale chamber



I H C presses give greater pressure in the bale chamber with less power than any other press of equal size. This results from the use of the toggle joint described on page 7.

I H C hay presses are principally constructed of steel and high grade iron, and while not unnecessarily heavy, they are remarkably strong and durable. All parts have been constructed with due regard to the strain placed upon them, consequently the presses are properly proportioned throughout.

Everything has been done to make I H C hay presses convenient and the users of these presses will find the low bale chamber, large hopper, large chamber openings, and, on the horse press the low bed reach, big advantages.



International motor baling press—4-horse power I H C
horizontal gasoline engine and 16x18" bale chamber

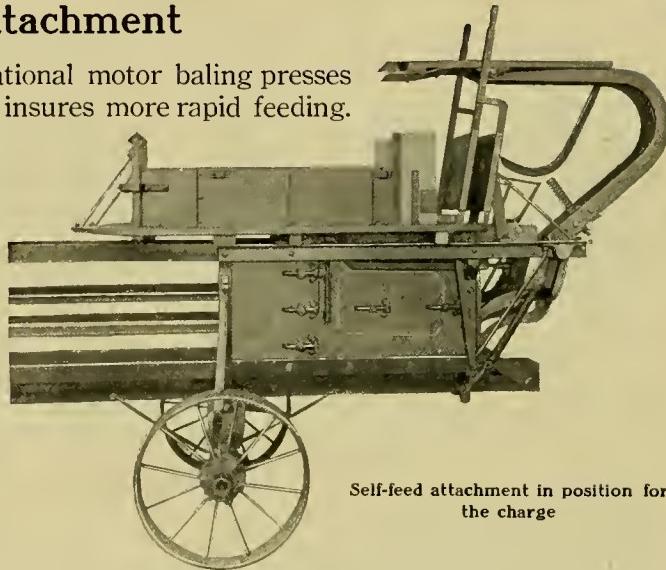


Self-Feed Attachment

The self-feed attachment for International motor baling presses increases the capacity of the press as it insures more rapid feeding. The self-feed never misses and is adjusted to feed as rapidly as the plunger head works. With this self-feed attachment, a condensing hopper and block setter are furnished. The feed arms are placed at the rear of the press just above the toggle links. These feed arms are raised well out of the way to allow a large charge to be pitched into the condensing hopper. The illustration on this page shows the self-feed at the beginning of a stroke. This feeder is operated by means of rollers and cams. The rollers are attached to each of the rear toggle links. These rollers run in cams that force the feed arms into the hopper. The feed arms are counterbalanced by coil springs that are attached to the cams.

The condensing hopper is operated from the plunger and condenses the charge under the feed arms before they descend.

The block setter is located just back of the hopper opening and within convenient reach of the operator. A new block can be placed in the block setter immediately after the previous block has been dropped or whenever convenient, and when ready the operator pulls the lever forward which places the block above the feed chamber, from where it drops into the bale chamber in front of the plunger head. A safety device prevents the block from being delivered at the wrong time. The feed table can be placed on either side of the press.



Self-feed attachment in position for
the charge



The Engine

A regular 3, 4, or 6-horse power I H C gasoline engine is used with I H C motor presses. When the baling season is over the bale chamber can be detached, and the engine has all the advantages of a regular portable engine. A pulley is furnished which can be attached in place of the drive chain sprocket on the engine. The buyer of an I H C motor press not only gets an excellent bale chamber but also a gasoline engine that in points of simplicity, economy, and efficiency is unsurpassed. These engines may be used for sawing wood, pumping water, running feed grinders, small shellers, bone cutters, and for many other purposes, to which an engine of their size is adaptable on the farm, in mills, and in shops.

All engines are regularly furnished with batteries, but on special order, at a slight additional cost, a magneto or auto sparker may be had.

Mounting

The power plant of I H C motor presses is self contained; that is, the engine, cooling tower, and gasoline tank, are mounted on a substantial metal truck. Two extra wheels and an axle are furnished which can be attached to the rear end of the power bed when it is detached from the bale chamber.

The front axle and the extra axle for the rear wheels are angle steel. The power bed, which is made of four inch timber, is strongly reinforced by 4x4" angles of heavy steel on each side.

As before stated, the bale chambers are interchangeable and any one of the three power plants may be used with any of the different bale chambers. However, it is not advisable to order a 3-horse power engine with a 17x22" bale chamber unless the work to be done is very light. In many cases it is a good plan to order the 6-horse power engine as it has a wider range of adaptability, and may be used for so many purposes that it will be a profitable investment.



I H C HAY PRESSES

I H C 2-Horse Pull Power Hay Press

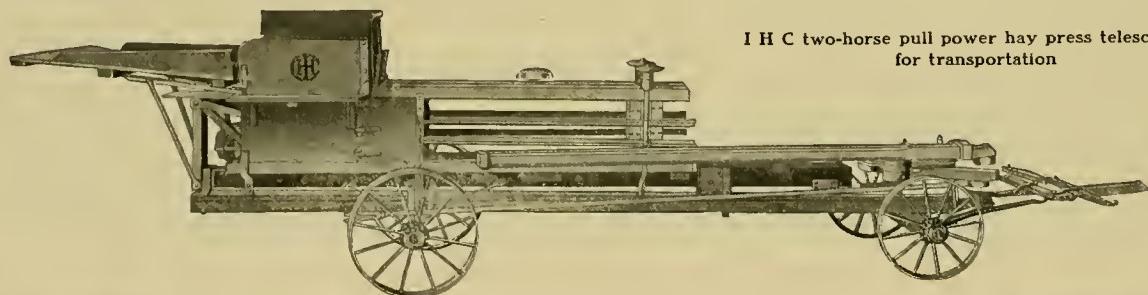
The I H C 2-horse pull power hay press meets the demand for a press of medium size and light draft. This press has many points of simplicity and convenience found in no other press, and, with less power and help, will bale as much or more hay than any other press of equal size.

It is the pull power combined with the I H C toggle joint and compound leverage that makes it possible with an I H C pull power press to do more work with less strain on the team, than with any other press. The toggle joint plunger used on this press is the same as that used on International motor presses.

This press is made with three sizes of bale chamber: 14 x 18", 16 x 18", and 17 x 22". It will form bales weighing from 90 to 150 pounds. It is difficult to state any definite amount this press will bale, as the capacity depends largely upon the quality of the material being baled, the skill of the operator, and the speed of the team. Under ordinary conditions a 14 x 18 press will bale from 8 to 10 tons of timothy hay in a day of 10 hours; a 16 x 18, 10 to 12 tons, and the 17 x 22, 12 to 15 tons. There are conditions where this press will bale considerably more than the estimates here given.

It is a comparatively easy matter with an I H C hay press to make bales weighing from 100 pounds to 120 pounds in from 6 to 10 feeds, as the large hopper and feed opening allow large charges to be put in and the opening into the bale chamber is correspondingly large.

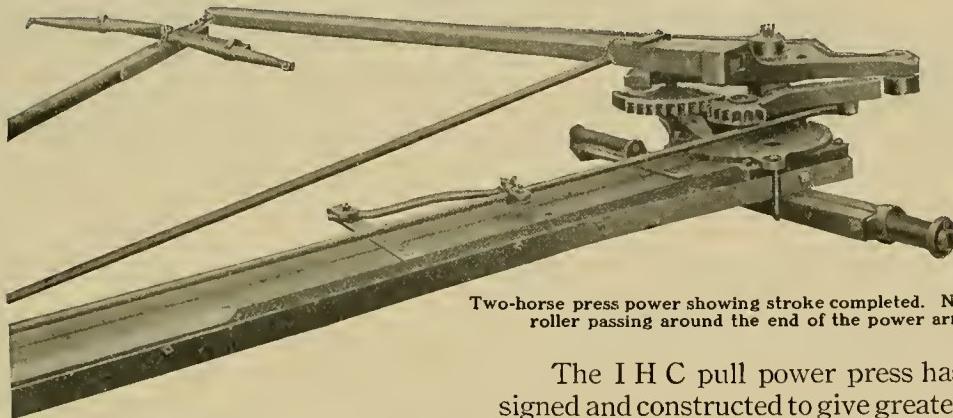
This press telescopes into a short space for transporting, which makes it very easy and convenient to handle in going over roads.



I H C two-horse pull power hay press telescoped
for transportation

I H C HAY PRESSES

Power



Two-horse press power showing stroke completed. Note the roller passing around the end of the power arm

The I H C pull power press has been designed and constructed to give greater pressure than any other press of equal size. It does this with the least possible strain upon the horses, and gives the pressure when it is most needed, that is, at the end of the stroke. At the beginning of the stroke the hay is loose and does not offer much resistance to the plunger, but as the stroke advances, the resistance increases. The effectiveness of the toggle joint plunger described on page 7 is here appreciated, as, without requiring any greater effort on the part of the horses, it exerts an increase in pressure as the requirement for it increases.

When the stroke starts, the power arm rests against the shock absorber. The sweep moves around, and the roller on the outer end of the cross head, comes in contact with the power arm close to its inner end and moves the power arm forward. As the sweep advances, the roller moves slowly along the power arm toward the outer end. The outward movement of the roller on the power arm increases the leverage, and as the need for it increases, gives greater pressure in the bale chamber without increasing the load upon the horses. The increase in pressure continues until the roller on the cross head passes the point where the pull rod is attached to the power arm. From this point until the roller passes around the outer end of the power arm, the pressure remains the same, and as the hay is well compressed, no more effort is required on the part of the horse to maintain the pressure.

I H C HAY PRESSES



Rear view of the sweep showing construction
of the cross head and two rollers
This sweep gives two strokes to each round

Power—Continued

When the power arm is released, the return of the plunger head into place is insured by a segment with which the I H C press is equipped.

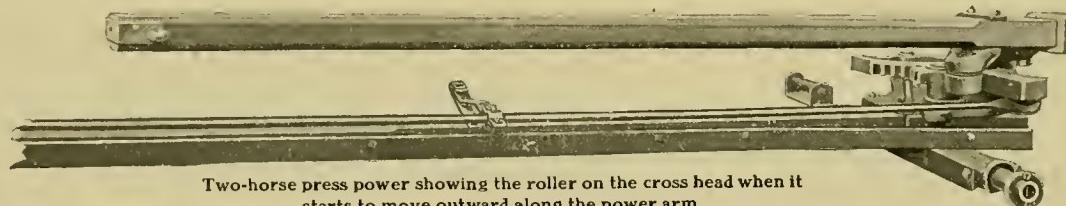
A spring shock absorber is provided for the power arm to strike against when it is released. This eliminates any injurious effects of the rebound and adds greatly to the durability of the press.

Lost motion, which might result after long usage, has been provided against by making the pull rod adjustable.

Two heavy angle steel bars extend the full length of the reach bed and are bolted to the wooden reach making it light, strong, and durable.

The plunger makes two strokes for every revolution of the sweep.

The sweep fits into the cross head in such a manner that if the brace should ever come loose or break, the sweep will slip out and be in no danger of breakage.



Two-horse press power showing the roller on the cross head when it
starts to move outward along the power arm



Convenience

Every hay press user knows how important it is to have a press that has been designed with regard to convenience. The most casual observer will readily recognize the superiority of the I H C hay press in this respect.

By referring to the illustrations in this catalogue, it will be noted that the distance between the sweep and the feeding table of the I H C hay press is greater than that found on any other press. Both of these points are located at the extreme ends of the press. The bale chamber of an I H C press may be set well into the interior of a barn and ample room be had for the revolution of the sweep to be made outside of the barn.

Another advantage of the convenient arrangement of these presses is that the bale chamber may be set between two stacks and hay fed from both stacks without resetting the press. This can not be done with any other than the I H C press, as the close arrangement of feeding table and sweep would not allow sufficient space for the sweep to describe the circle necessary to operate the press.



Note the convenient length of reach bed which allows bale chamber to be set inside of barn and sweep operated outside

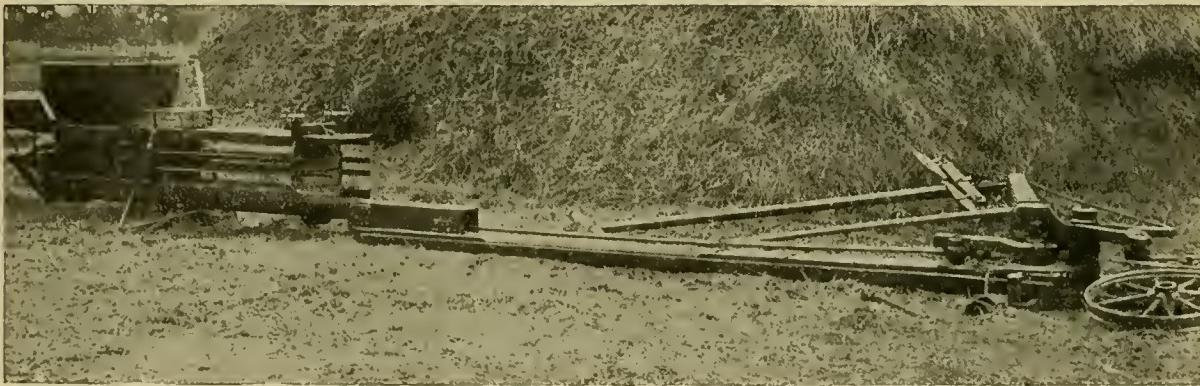


Convenience—Continued

The reach bed of the I H C press is about 4 inches high and is very narrow. This construction gives the I H C press the lowest and shortest step-over found on any hay press. When operating presses that have a high step-over, the horses will generally slow down, hesitate, and often stumble at this point which is annoying to the men, wearing on the horses, and slackens the speed of the press. The lowness and narrowness of the I H C reach bed enables the horses to walk over it without the least trouble. Simply compare this reach bed with any other, and its advantages will be readily appreciated.

Furthermore, the power construction of the I H C press is such that when the horses reach the step-over, they are pulling practically no load. One stroke has been completed before they reach the step-over and the load of the next stroke does not begin until the low, narrow step-over has been passed.

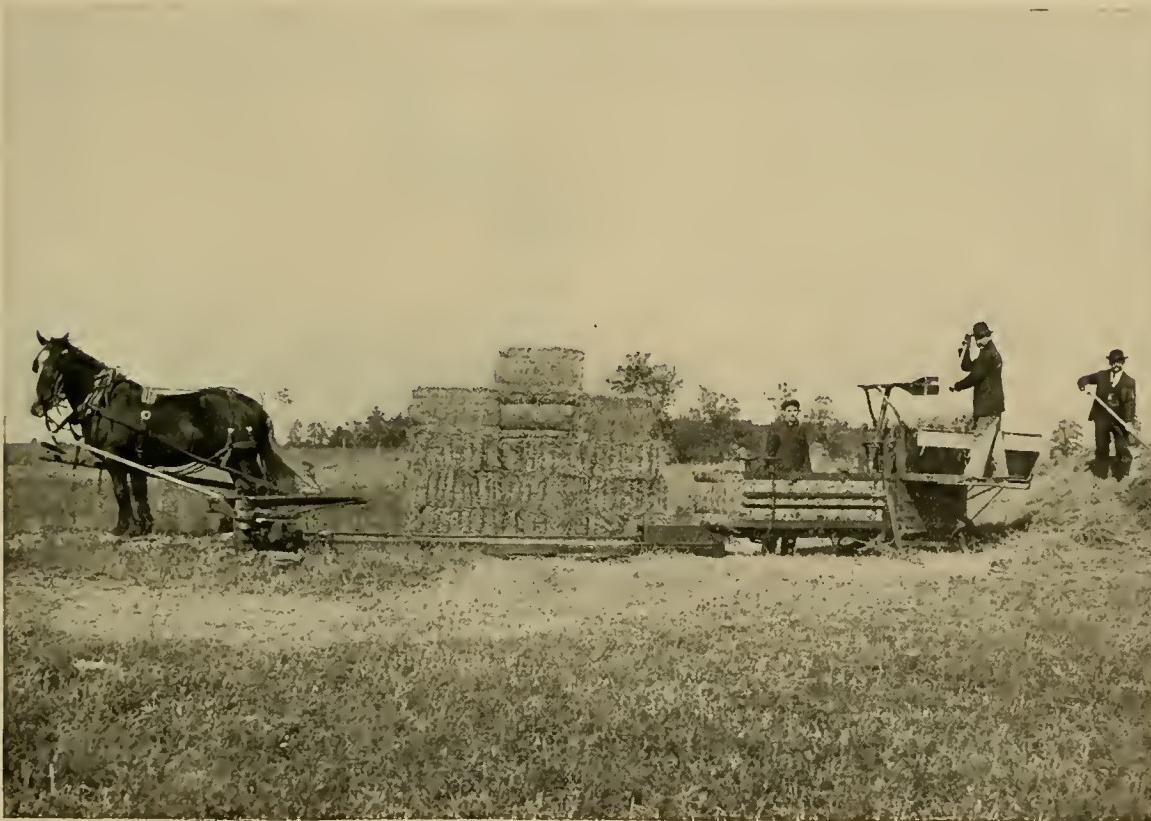
The bale chamber on all I H C presses is very low and it is an easy matter to reach across and tie the bale. This saves time and trouble as, in tying the bale, it is not necessary to go around the bale chamber to the opposite side.



I H C two-horse press set for work. Note the low step-over for the team



I H C HAY PRESSES



I H C two-horse press with self-feed attachment

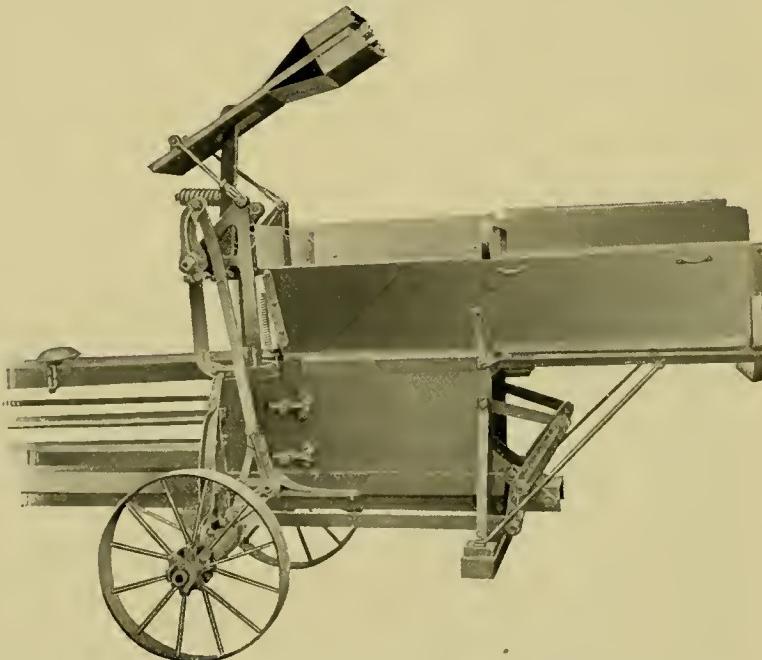
PAGE NINETEEN



Self-feed Attachment

The self-feed attachment for one and two-horse power presses illustrated on this page is simple and effective in its operation. It feeds regularly as the plunger works, adding to the capacity of the press and reducing the work of feeding. It consists of an overhanging feed arm and condenser. The feed arm is operated by steel bars extending forward from the rear toggle links. These bars are pivoted at the bottom of the bale chamber. The feed arm is raised sufficiently high to allow ample room for pitching large charges into the hopper, and the large opening into the bale chamber allows the charges to be fed easily. The hay is pitched into the hopper and the feed arm forces it down into the bale chamber. This eliminates all occasion for dangerous foot feeding.

This self-feed attachment is furnished on special order with any of the I H C pull power horse presses.



Self-feed attachment for I H C horse power presses



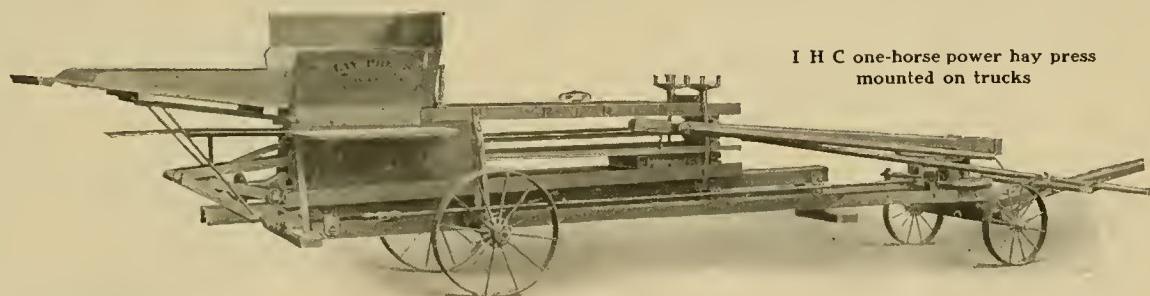
I H C HAY PRESSES

I H C One-Horse Pull Power Hay Press

The I H C one-horse pull power hay press has all the features of the I H C two-horse pull power hay press, except that it is a smaller and lighter machine. It proves a very satisfactory press for the farmer who wishes to bale his own hay. With this press he can bale his hay at a time when it is most convenient, and with a small amount of help. If he wishes he can do a little custom baling for his neighbors, and in this way make enough to pay for the press in a very short time.

This press has a 14 x 18 bale chamber, and makes bales weighing from fifty to ninety pounds. The bales may be tied with two or three wires. Under average conditions this press will bale from six to eight tons of hay per day.

The bale chamber has a large opening allowing the feeder to put large charges into the chamber. A steel hopper is provided with an extension top on one side and front. The plat-



I H C one-horse power hay press
mounted on trucks



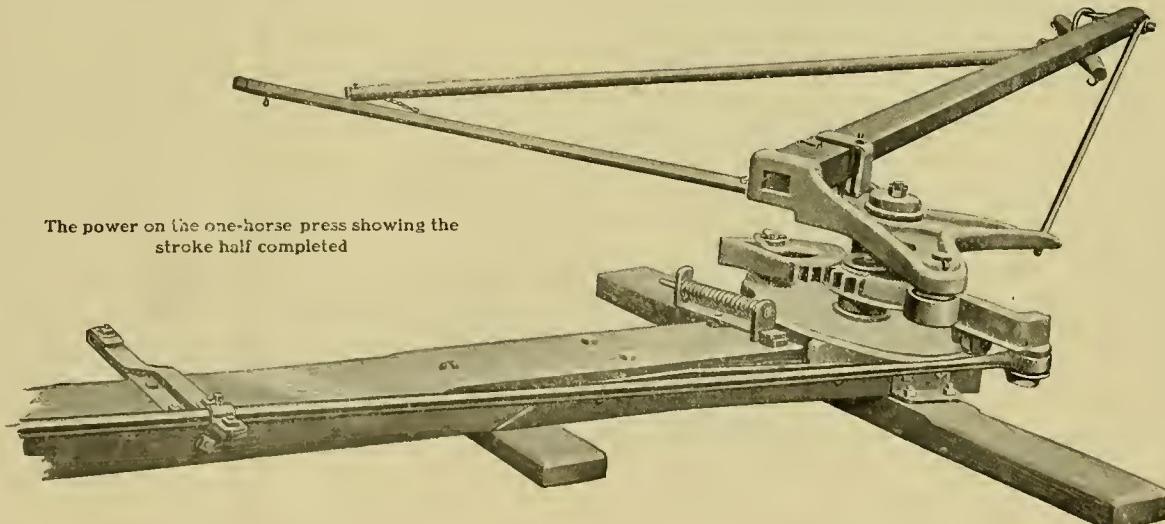
I H C HAY PRESSES

form upon which the feeder stands can be placed on either side of the press.

The one-horse press is equipped with trucks only on special order. When mounted on trucks the presses can be telescoped, which makes it convenient for transporting over roads and through fields.

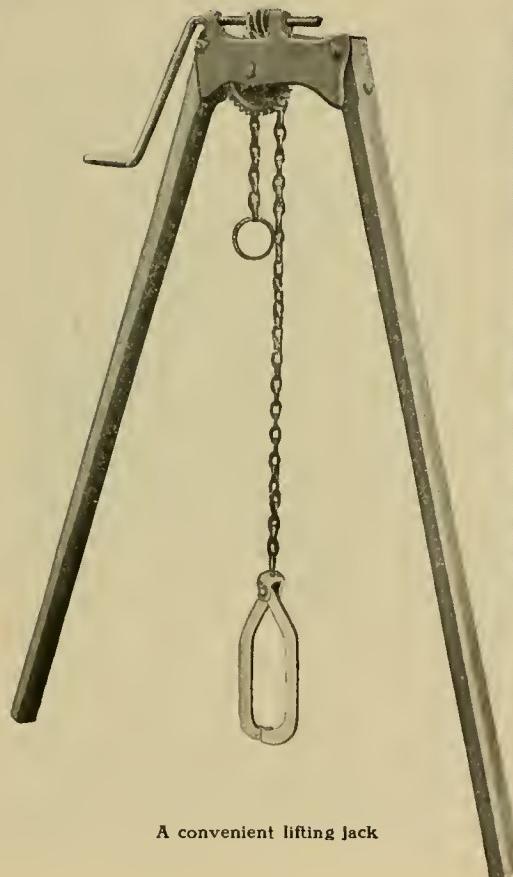
Power

The power construction of this press is the same as the two-horse pull power press. The toggle joint plunger and compound leverage which gives the two-horse press its great compressing power are also used on the one-horse press. Because of this construction greater pressure is exerted in the bale chamber of this one-horse press than with any other press of equal size, and with less strain on the horse.



The power on the one-horse press showing the stroke half completed





A convenient lifting jack



Front end of press raised with lifting jack so that the wheels may be put on

Lifting Jack

The lifting jack shown on this page is regularly furnished with I H C two-horse presses and with International motor presses. It is operated by means of a worm and gear. With this jack the press can be easily and quickly raised or lowered. One-horse presses are equipped with this jack only on special order.



I H C HAY PRESSES



PAGE TWENTY-FOUR



**INTERNATIONAL HARVESTER
COMPANY OF AMERICA**
(INCORPORATED)
CHICAGO U S A





